UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ALASKA
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KIMBERLY ALLEN, Personal Representative of the ESTATE OF TODD ALLEN, Individually, on Behalf of the ESTATE OF TODD ALLEN, and on Behalf of the Minor Child PRESLEY GRACE ALLEN,

Plaintiff,

vs. No. 304-CV-0131 (JKS)

UNITED STATES OF AMERICA,

Defendants.

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DEPOSITION OF RICHARD A. RUBENSTEIN, M.D.

February 22, 2006

RICHMOND, CA

Reported by:
DANUTA KRANTZ
CSR NO. 4782

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MR. GUARINO: This is Gary Guarino. I represent the United States.
THE VIDEOGRAPHER: Thank you.
The court reporter will please swear the witness.
RICHARD A. RUBENSTEIN, M.D.
having been sworn as a witness,
testified as follows:
THE VIDEOGRAPHER: You're on the record.
MS. McCREADY: Thank you.
EXAMINATION BY MS. McCREADY
MS. McCREADY: Q. Good afternoon, Doctor.
A. Good afternoon.
Q. Is it Rubenstein?
A. Rubenstein, yes.
Q. Okay. Dr. Rubenstein, what did you do to prepare for this deposition this afternoon?
A. I reviewed extensive documents, reviewed extensive literature, reviewed extensive depositions, I reviewed the expert reports of plaintiff and defense experts.
Q. Okay. On the extensive documents, are you talking about Mr. Allen's medical records?
A. Yes, And I also reviewed a CD of

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his MRI scan -- excuse me, of his CT head scan of 4-19-03.
Q. So you reviewed documents as well as the films that were taken at Providence Alaska Medical Center on 4-19-03; is that correct?
A. Yes.
Q. Let me just pull out -- in your report you had listed some records that you had reviewed. I will mark that.
(Document marked Plaintiff's Exhibit 1 for identification.
MS. McCREADY: Q. Doctor, I am marking Exhibit 1, at least what was provided to me as your report that was dated November 29 --
A. Correct.
Q. 2005. And really, I just wanted to focus on the medical records that you had listed in this report.
Did you ever -- is there any listing of medical records by Bates stamping numbers?
A. No.
Q. Have you gotten any correspondence from Mr. Guarino that sort of sets forth everything that he sent to you?
A. Yes.

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Q. Did you have his correspondence at hand?
A. Yes. Right. I do.
Q. I would like to mark that as an exhibit, any correspondence you had with Mr. Guarino.
A. If you mark on the underside of the -- you know what I'm saying?
Q. Okay.
(Document marked Plaintiff's Exhibit 2 for identification.)
MS. McCREADY: Q. And you've handed me your file, and is it the -- let me just ask. There is a December 20, 2005 letter?
A. All of the correspondence is in there.
Q. So this is this whole stack; is that correct?
A. Correct.
Q. What I am going to do is put a Bates stamp -- I'm sorry, an exhibit sticker, Exhibit 2, on the back of the first page of that, but the whole thing will become Exhibit 2.
A. Okay.
Q. And then we will just copy it after

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the -- at a break or after the deposition. Okay.
A. Or if the records are -- they're probably not that extensive, but the way I generally do this is to have the court reporter send someone back here with their own copying machine to copy it, and then rather than, you know, her take the time after the deposition to do it.
Q. Okay. We can talk about that when we go off record.
A. Sure.
MR. GUARINO: Donna.
MS. McCREADY: Yes.
MR. GUARINO: Dr. Rubenstein is coming through clearly, but about halfway through or partway through some of your questions you start to fade, and I am wondering whether you are turning away from the microphone or whether it's just the line connection.
MS. McCREADY: I don't think it's the line connection. I just think it's the setup. I will try to keep my voice up.
MR. GUARINO: That was better. I heard that clearly all the way through.
MS. McCREADY: Okay.

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Q. In terms of literature, if you could -- I am curious what literature you have reviewed.
A. I have reviewed -- it's right here, if you want to go through it article by article.
Q. Okay.
A. Okay. Much of it is literature that was memorialized in your expert Susan Shott's bibliography, but there is additional literature, you know, from my own files.
Q. Do you have those separated out, like what you got, what literature was cited by Dr. Shott and what literature you sort of looked up on your own?
A. I do, by and large. There may be a couple of articles in the Shott file. Let me put it this way. Most of the articles in the Shott file were, you know, I already had in my files. There were some that I didn't, and, you know, they are mixed together really.
But I can say these articles here are articles that were -- clearly came from my information, but most of the Shott articles I already had in my bank of knowledge. It's just that they -- there was an overlap.

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Q. Sure. Okay. All right. I want to come back to that.
Anything else you did to prepare for deposition, today's deposition?
A. No, I don't think so.
Q. Did you talk to Mr. Guarino?
A. When?
Q. In preparation for this deposition.
A. Yes, I did talk to Mr. Guarino. Yes.
Q. Just for about how long?
A. You mean in terms of --
Q. Preparation --
A. Are you talking about today?
Q. I am talking about --
A. What are you talking about?
Q. I'm talking about in preparation for this deposition.
A. I think I talked to him about one hour on Sunday night, and I talked to him today for about maybe ten minutes.
Q. Then did you talk about -- I am just curious if you gentlemen discussed the other depositions that have been taking place.
A. Yes. I mean, that certainly was

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one of the topics we discussed, yeah. Yes.
Q. All right. If you could tell me, what exactly is a neurologist?
A. A neurologist, or neurology, the specialty that deals with diseases of the central and peripheral nervous systems, the junction between nerves and muscles and muscles.
Q. What is the difference between a neurologist and a neurosurgeon?
A. Well, we think and they operate.
Q. Okay.
A. If you want to know the truth.
Q. I am sure you have been asked that question before. So you think and they operate?
A. Correct.
Q. What is the difference in training?
A. A neuro -- a standard neurology training program is one year of internship and three years of residency training and then additional fellowship years after that, if one wants to really subspecialize in any -- an area of neurology.
Neurosurgical training, I think pretty much in the good neurosurgical training programs, I think the standard training is about around five

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years or so after medical school.
Q. Okay. So are there -- do neurologists go through surgical residencies?
A. No.
Q. Then do you do surgery?
A. No.
Q. Are you board certified as a neurologist?
A. Yes.
Q. All right. Is board certification, is that something that you have to -- you have to be recertified after a particular period of time?
A. You know, they did have after many years, after I was board certified, they did have a recertification exam, and I think that has kind of gone by the wayside, you know. There were a few years when that was in vogue, and I have not heard anything more about recertification exams.
Q. When were you actually board certified?
A. I was board certified in 1976. I was elected to fellowship, which is a higher level of board certification, in 1982.
Q. Then have you been recertified since '76?

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familiar with a subarachnoid hemorrhage presentation?
A. Yes.
Q. Would you agree that emergency room care providers should consider subarachnoid hemorrhage when a patient presents with their head hurting?
MR. GUARINO: Donna, that faded out. I heard half of the question.
MS. McCREADY: Q. Would you agree that the emergency room care provider -- sorry. Let me start over.
Would you agree that emergency room care providers should consider a subarachnoid hemorrhage when the patient presents to the ER with their head hurting?
A. I would not agree with that.
Q. Why not?
A. Because you didn't qualify the question. You need to qualify the question and be very specific. I mean, are you referring generically, are you referring to Mr. Allen specifically in terms of a patient who is a chronic pain, chronic headache -- you know, he had a long history of headache before this.

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In someone who has chronic headaches, who is on narcotic medication, patients who have a preexisting history of headache as opposed to someone who arrives in an emergency setting de novo, you know, without any prior history of headache, and has a severe, excruciating headache, the worst headache they have ever experienced in their life, you've got to be very specific.
In the one instance of a patient like Mr. Allen, who was a chronic pain patient, chronic headache patient, on narcotics, on a narcotic contract, or somebody with preexisting migraine, frequent migraines, et cetera, in other words, a chronic headache patient, certainly someone who presents in an emergency room, the diagnosis of subarachnoid hemorrhage would not be high on my differential.
Q. And the question is not whether or not it's high on the differential. Should it be considered?
A. I don't even think it needs to be considered, you know, unless there is something that is sufficiently atypical about the presentation that would warrant an elevated level of suspicion that there was something new going

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on, as opposed to someone who presented without any prior history of headache, you know, as I said, had a severe excruciating headache, obviously then, the first thing you would think of would be a subarachnoid hemorrhage.
Q. Would you agree that once a patient -- assume for a moment there is a high suspicion of a subarachnoid hemorrhage, would you agree that the standard of care is then to order a CAT scan?
A. Yes.
Q. Would you agree that a CAT scan, generally, the sensitivity is that it will pick up 90 to 95 percent of bleeds?
A. About 95 percent of subarachnoid hemorrhage, yes.
Q. Would you agree if that was -- if a CT was negative, then you would go do a lumbar puncture if you had a high suspicion -- index of suspicion of a subarachnoid bleed?
A. If somebody presented with a sentinel headache that was, you know, as I said, arose basically de novo out of nowhere, severe headache, the sequence of events certainly would be a CT. If that was negative, then a spinal

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fluid evaluation.
Q. At least in your experience and your review of the literature, CTs pick up most, I mean, 95 percent of bleeds?
A. Correct.
Q. Would you agree that, just in general, talking about the --
A. Let's say, CTs pick up about 95 percent of acute subarachnoid hemorrhage if done, you know, within the first 12 to 24 hours after the bleed. You know, by, let's say, five days after the bleed, the sensitivity of the CT is about 50 percent.
Q. Sure. But in at least that first, did you say 24 hours?
A. 24 hours.
Q. Right. It's going to have a 95 percent sensitivity rate?
A. Correct.
Q. I just want to ask some general questions about treatment of patients who are diagnosed with subarachnoid hemorrhage.
It sounds like that is at least where your area of expertise is. You worked in terms of treating patients with subarachnoid hemorrhage?

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lean forward just a second.
A. Sure.
Q. Is there a set of boxes at the top?
A. Yes. Pain 7 to 8. I am sorry.
Yes. 7 to 8. You are right.
Q. He is complaining of pain?
A. Yes.
Q. In that visit he is looking for medication; is that right?
A. Correct.
Q. And they give him medication?
A. Yes.
Q. And there is a description of headache and tender scalp in the temporal area. Is that how that description reads?
A. Yes.
Q. Was he complaining of nausea and vomiting at that visit?
A. I don't see it.
Q. Are there any visits that Mr. Allen -- in your review, extensive review of these records, did you see any visits that Mr. Allen made to the ANMC Family Medicine Clinic complaining of pain and nausea and vomiting?
A. He made plenty of visits for pain,

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but in terms of nausea or vomiting, I did not see any until 4-19-03.
Q. Until 4-19-03.
Did you see any visits to -- by Mr. Allen to the Alaska Native Medical Center Family Medicine Clinic complaining of pain where he had been taking his pain medication and couldn't control his pain with his pain medication?
A. Well, I mean, just by virtue of the fact that he was coming back for frequent pain refills and was on the pain contract starting 12-12-02, I think that signifies that he was a chronic pain patient. He had certainly had episodes of breakthrough pain, and requested pain medication until they got him on this contract.
Q. On the morning of April 19, 2003, is it your understanding that Mr. Allen was looking for pain medication?
MR. GUARINO: I am sorry, Donna, I didn't hear that question.
MS. McCREADY: Q. On the morning of April 19, 2003, was it your understanding that Mr. Allen was looking for pain medication?
A. I think that a collateral reason he

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was coming to Anchorage from Valdez was to pick up his refills. I mean, he called on the 18th to pick them up. So he was coming to pick up pain medicine there.
Q. Is that your understanding?
A. Well, I mean, he was symptomatic, you know, with what he described as ear, head and jaw pain, which was not really any different than his chronic symptoms.
Q. Is it your understanding that he -- was part of the reason why he went to the ER that morning, that is, the emergency department at ANMC on the morning of April 19, was to pick up his pain medications?
A. I don't know.
Q. Do you know whether or not he picked up his pain medications the night before and started taking them?
A. Well, there is some note, I think it was in his wife's deposition, that she didn't know, you know, if he had taken his -- he had medication, and she didn't know if he had taken the medication. Let me find that for you.
I can't find it exactly, but she was -- she acknowledged in her depo that he had pain

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medicine the day before, or the night before, and that she was not aware if he had taken it. That's what I recollect.
Q. Let's go to the note of the -- let's go to the emergency room visit from April 19, 2003. I am going to mark that sheet, the emergency room visit, Exhibit 9.
(Document marked Plaintiff's Exhibit 9 for identification.)
THE WITNESS: Hang on. Yes.
MS. McCREADY: Q. Can you tell -- go ahead.
A. I had my copy of it, but I am just -- hang on.
Q. Sure. Take your time.
MR. GUARINO: Which record are you talking about, Donna?
MS. McCREADY: I am talking about the emergency room visit from April 19, 2003.
MR. GUARINO: But there were several records that day. Which doctor or which -- can you describe it better than that?
MS. McCREADY: Oh, I'm sorry. I am talking about the morning of the emergency visit at ANMC.

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with reporting 10 out of 10 pain, at least pain -- and they mention their head, that it would be important to take a history, that is, a detailed history, to distinguish whether or not this pain was different than pain this patient had had before?

A. Where do you see 10 out of 10 pain?

Q. I'm sorry, on Exhibit 9 at the top, under "7-10, Ears and head are hurting. Up all night. P equals 10."

A. I don't -- you want to show that to me?

Q. Sure. Can you see that? Right there. "P equals 10." Had you noticed that before?

A. I didn't really take note of it, no.

Q. But you see now that, at least the nurse or somebody had written down that this patient was reporting pain equals 10?

A. Correct.

Q. So my question was, if you have a patient reporting to the emergency room -- and this was an emergency room visit -- reporting, "Pain 10 out of 10. Ears and head are hurting.

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Up all night," wouldn't it be important to take a history and determine whether or not this was pain that was different than what this patient had had before?

A. Well, you know, I don't think that this was sufficiently atypical to warrant a higher index of suspicion in a chronic pain patient on narcotics. Let me just say, that, because the, you know, the severity, or the symptom of severe headache, let's say, sentinel headache, thunderclap headache, et cetera, in the greatest preponderance of patients is benign, that is No. 1; that the only real distinguishing features clinically by history that would warrant an increased index of suspicion of there being a subarachnoid hemorrhage or other intracranial process going on, would be, 1, if there was loss of consciousness associated with this; No. 2, and even more importantly, if there had been a seizure associated with this increased pain.

Other than that, there is no higher index of suspicion just because he reports a 10 and he is a chronic pain patient on narcotics that would warrant a higher index of suspicion.

Q. But here is my question, Doctor.

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In this scenario, and we are talking about Todd Allen, where he is coming in, and he is a chronic pain patient, and he is reporting 10 out of 10 pain, and he is at the emergency room at ANMC at 7:10 in the morning, wouldn't it be important for an emergency room provider to take a history such that to distinguish whether or not this was pain that was different than the pain he had had in the past? Wouldn't that be important?

A. So what? You know. The issue is --

Q. So what?

A. Yes. But I am saying -- I am saying that, you know, he does report increased pain, but he has reported many episodes of breakthrough pain. You know --

Q. The question is -- I am sorry.

A. But the issue is that just because he reports increased pain and he is a chronic pain patient on narcotics does not necessarily at all indicate a higher index of suspicion unless there are ancillary neurologic symptoms going on with this.

If you had told me, well, you know, there was a loss of consciousness, if you had told

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me that he had had a seizure, if you told me that he had double vision, you know, those would -- and especially if he had had a seizure, those would be alarming symptoms.

And if this were a patient who came in to ANMC de novo, no history of prior headache, no history of narcotic administration, et cetera, in the past, and complained of 10 out of 10 headache, then, of course. But in this setting, there is no higher index of suspicion that there is a potential sentinel hemorrhage or subarachnoid hemorrhage going on.

Q. So if this -- so if you are a chronic pain patient, then the emergency room provider really doesn't need to take a detailed history when you show up with 10 out of 10 pain.

A. Well, I think --

Q. No, is that your opinion?

A. What do you mean by detailed history? Define "a detailed history."

Q. One part of it would be to determine whether or not the patient's pain is different from what they have been experiencing in the past. Would that be important to find out?

A. Well, I presume that, you know, he

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I would say, you know, in the absence of any other symptoms that would indicate an acute cranial process, I would say he doesn't need an imaging study, you know, send him home, and I don't think he needs any other workup.

Q. If the emergency room physician -- I understand that the fact this was a chronic pain patient is really central to your opinion; is that correct?

A. Correct, and that these symptoms were not sufficiently atypical and did not occur within the context of more alarming neurologic symptoms, such as a seizure, diplopia, focal neurologic deficit, that would have been highly alerting. In other words, in -- I think a very relevant study of this is Linn's study of sentinel headache, because that is really an issue we are dealing with in this case.

In that study where he compared sentinel headache to perimescencephalic hemorrhage, which is a benign form of subarachnoid hemorrhage, with benign thunderclap headache. All of the symptoms overlapped of everything in terms of headache intensity, headache onset, et cetera; and that the only distinguishing feature between a subarachnoid

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hemorrhage, an aneurysmal subarachnoid hemorrhage headache, and that of benign thunderclap headache was really seizure and double vision, but most prominently seizure.

So, the fact that he presented in this fashion is not sufficiently alarming in view of his long history of chronic pain to warrant a further suspicion that there was an intracranial process going on.

Q. Going back to that example you just gave.

If an emergency room physician called you and said, Look, I have got this chronic pain patient in here. They have always been able to control their pain with their pain medications in the past, but now they are here in the emergency room complaining of 10 out of 10 pain. They have been taking their pain medication. They can't control it. And by the way, they have got nausea and vomiting.

MR. GUARINO: Objection to foundation. That question misstates the record.

MS. McREADY: Q. Go ahead. Would that cause you some concern to want to work up that patient?

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A. The first thought that I would have is that they are having breakthrough pain, and that they may need to have an alteration in their pain medication schedule, and that I would not be alarmed in the setting of a chronic pain patient on a narcotic contract, that this was sufficiently different and atypical to warrant a big workup or get a CT scan, et cetera, or do an LP.

But, you know, obviously, as I have, you know, gone over and over again, if this was a chronic pain patient and came in with this breakthrough pain and reported that they lost consciousness, they had a seizure, they were having double vision, they couldn't move the right side of their body, then I would say there is something else going on here.

Q. So let me just be clear.

In the circumstances I just gave, which are similar to the circumstances in this case, a gentleman presents to the ER, he is a chronic pain patient reporting 10 out of 10 pain, he's got nausea and vomiting, he's been taking his pain medications, and he has not presented in that way before; that is, he has not presented with nausea and vomiting, and he has not presented with having

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taken his pain medications and not being able to control the pain.

My only question is, then, it sounds like your opinion is that that doesn't matter, you don't need to rule out a subarachnoid hemorrhage under those circumstances?

MR. GUARINO: I have an objection before the question is answered. Are you presenting that as a hypothetical?

MS. McREADY: Yes, it's a hypothetical.

MR. GUARINO: As a hypothetical? Because if you are intending to represent that he was taking pain medication and then it was not working, as opposed to taking it and throwing it up, my objection is it's not representative of the record.

MS. McREADY: I understand your objection.

Q. Go ahead.

A. My answer is that it's not sufficiently atypical from his long-standing preexisting presentation to warrant --

Q. Suspicion?

A. -- suspicion that there is a sentinel headache going on, because I don't

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A. I am trying to find -- she told somebody in the ER that he had no prior history of headache. I am trying to find that.

Q. If you want to look at the bottom of Exhibit 10 on Allen Providence 59, under Review of Systems CNS. I don't know if that is what you're referring to.

A. Hang on for a second.

Yes. I do not believe he had any history of headaches, correct. That's what I was referring to.

Q. She probably would have gotten that from the wife as well?

A. Right. I guess it was clear that he never related to his wife that he had headaches, per se, but he clearly related it to physicians that had followed him, you know, over the -- since 11-22-99.

Q. Have you drawn any inferences from that?

A. Only that there is a, what I think is a significant inconsistency. That's all.

Q. Well, do you think there is a -- I guess I want to ask you whether or not there are some people who feel that they only want to talk about their medical problems with providers as opposed to talking to their loved ones or friends about it.

A. You know, I am not drawing any conclusions. All I am saying is there is a major inconsistency.

(Document marked Plaintiff's Exhibit 11 for identification.)

MS. McREADY: Q. I have marked as Exhibit 11 Dr. Lee's note from the admission date 4-19-2003, and it's Bates stamped Allen Providence 21, 22, 23.

And is it your understanding that Dr. Lee is the admitting --

MR. GUARINO: How many -- it's not clear to me which ones you are marking, Donna. I have got two records.

MS. McREADY: Sure. That's why I said Bates stamp Nos. Allen Providence 21, 22, and 23.

MR. GUARINO: My copies don't have those numbers on them. If you could tell me -- identify what the first page looks like.

MS. McCREADY: Yes. At the top it says "Admission date, April 19, 2003." Then it says, "Admitting diagnosis."

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MR. GUARINO: All right. How many pages have you marked?

MS. McCREADY: Exhibit 11 is three pages.

MR. GUARINO: All right. I think I have got that. Thanks.

MS. McCREADY: Q. Dr. Lee was the admitting doctor at Alaska Providence?

A. Right.

Q. Okay. Providence Alaska, I meant to say.

A. She was the internist who admitted him.

Q. Exactly. Internist.

She noted under History of Present Illness, "The patient's history is obtained from his wife and Dr. Susan Dietz, emergency room physician."

According to the patient's wife, he had been complaining of a headache in his right jaw area radiating to the back of his head and then up to the top of his head along the backside of his head. Symptoms began last night."

Do you understand -- I mean, do you have any explanation as to why the wife would tell the internist at Alaska -- at Providence Alaska later that day this description of her husband's headache if that is not, in fact, what he had?

A. No.

Q. You don't know why?

A. No.

Q. You don't know how that happened?

A. No.

Q. Is this description, the headache in his right jaw area radiating to the back of his head and then up to the top of his head, could that be consistent with a subarachnoid hemorrhage?

A. Yes.

Q. When you -- turning to that next page of Dr. Lee's note, this is Exhibit 11, where she -- under Assessment, and she says, "Subarachnoid hemorrhage with diffuse cerebral edema and impending herniation and brain death."

When you had reviewed the films in this case, had you noted the diffuse cerebral edema?

A. Yes.

Q. Did you develop any opinions about how long it would take to develop that extent of the edema that was there?

A. Yes.

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Q. What is your opinion?
A. Pretty immediately from the time the aneurysmal subarachnoid hemorrhage occurred.
Q. So the edema you saw on the CAT scans from Providence Alaska, you think that that edema could develop immediately?
A. Yes.
Q. And immediately meaning within minutes?
A. Yes. By the way, I should say that -- and, you know, this should be on the record as well, that the reason that it's more likely than not that Mr. Allen, you know, that his significant breakthrough pain, you know, occurred at 7:10 a.m. and that a CT scan would have been normal had it been obtained, you know, to a reasonable degree of probability that morning, would be the fact that if he had a hemorrhage and brain edema that was clearly evident, done -- the scan that was done around, you know, 5:30 or 6:00, he wouldn't be walking around at 7:10 -- at 8:07 a.m. when he was discharged. He would have been comatose at 8:07 a.m. in the ANMC clinic.
In other words, he would not have walked out of the clinic, he wouldn't have gone to have

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breakfast, he ate at Sam's Club, et cetera, with that CT appearance. That is incompatible with him walking around and being conscious.
Q. Was his neurological presentation that morning at 7:10 at the Alaska Native Medical Center emergency room, was that consistent with a patient who could have a warning leak?
A. Well, you know, it's very difficult for me to say. If he had had no history of chronic pain and this whole narcotic history, and he was a de novo patient, I would say certainly it could be a warning leak.
But I think the picture is so confusing, and there is not anything sufficiently atypical, as we have gone over, and pardon the pun, ad nauseam, that -- to warrant a higher index of suspicion. Yeah, could this severe pain in a headache-free patient presenting for the first time? Absolutely.
Q. I think you read more into my question. I really just want to know whether or not a patient could appear that neurologically intact, as Mr. Allen did that morning, that is, you know, they're walking, they're talking; could a patient be that neurologically intact and have a

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warning leak?
A. Now, you -- let's be very specific.
You are talking in Mr. Allen, and by definition, when you state "Mr. Allen," you are talking about a chronic pain patient with a long preexisting history of headache, on narcotics for chronic head pain, who presents with, you know, an increase in his head pain; you are asking me whether in that specific instance, his increase in pain could be a demonstration of a warning leak, correct? That is your question?
Q. That is my question, but I --
A. It has to be very specific.
Q. Well, let me put it in context, because you just said that there is no way this gentleman with the CT -- if his CT looked like at 7:00 in the morning what it did at 5:30 at Providence, there is no way -- I mean, the guy would have been in a coma; is that correct?
A. Correct.
Q. So my only -- my question is whether or not patients -- let's not talk about Mr. Allen -- whether or not patients --
A. This is a hypothetical question.
Q. This is a hypothetical -- whether

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or not patients who are walking and talking and seem to be neurologically intact, whether or not those patients, hypothetically speaking, could have a warning leak.
A. Yes, of course. Sure.
Q. Is that sort of the -- is that the common presentation, that is, that patients who have warning leaks may present to a medical provider and yet be neurologically intact?
A. Yes.
Q. I am taking a moment to look, because I don't want to go over old ground. We have actually covered a lot.
A. Sure.
Q. Going back to your report, and I am on page 3, and I am on that third paragraph. And where you say, "There is no reason to suspect that this pain presentation was any different from multiple prior pain presentations over the past three years."
A. Where are you reading?
Q. I'm on page 3.
A. Which paragraph?
Q. Third paragraph.
A. From the top?

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Q. I'm on the last sentence.
A. Okay. Okay.
Q. "There is no reason to suspect that this pain presentation was any different from the multiple prior pain presentations over the past three years."
And I actually think that we have gone over that.
A. Correct, we have.
Q. I want to ask you about the paragraph that's 1, 2, 3, 4, 5, 6 down, that starts with, "In any event."
A. Okay.
Q. It says, "In any event, it would be speculative to conclude that any purported imaging abnormality early that morning would have warranted a spinal fluid evaluation in someone with a known preexisting complex pain disorder and opiate habituation with a supple neck."
And I am not sure I understand that. I think the part I don't understand is, conclude -- "speculative to conclude that any purported imaging abnormality early that morning would have warranted a spinal fluid evaluation."
What do you mean there?

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A. I mean that more likely than not if we assume, let's say hypothetically, that this was a sentinel bleed, that the CT would have demonstrated a hemorrhage. In other words, I am saying that the CT in -- the greater likelihood is the CT would have been normal, and that in this setting, as I have opined over and over again, someone presenting in this context with a complex pain disorder, opiate habituation, supple neck, without other symptoms that I have already gone over, would have warranted a higher degree of suspicion prompting an imaging study that was available at ANMC on 4-19-03.
Q. Because if he had -- if there had been an imaging abnormality, that is, had there been an abnormal image, you wouldn't need to look at his spinal fluid; isn't that correct?
A. It really depends. The importance in someone who has a bona fide history consistent with subarachnoid hemorrhage, let's say somebody who presents without a prior headache history, severe worst headache, immediately going to a CT scan is that you would never do an LP as the first test because they could have a hem -- you know, they could have a hematoma in their brain, and you could precipitate their death by herniation. So you always do a CT first.
Q. Right. When I read that paragraph, it sounded like even if there had been something, they had seen something on his CT, you know, it wouldn't have warranted doing a lumbar puncture.
A. Well, if they -- it had been done and there was a clear subarachnoid hemorrhage, you would not need to do a -- but in somebody with a sentinel headache in which the CT was negative, which it is in, you know, a great preponderance of cases, the way you make the diagnosis --
Q. Is through a lumbar puncture?
A. -- is through a lumbar puncture. But there are those cases in which CT and LP are negative. As a matter of fact, at least in, you know, Widget's study -- he is a -- of sentinel headache cases, the importance of the benign nature of sentinel headache is that when the CT and the LP are normal, that you don't need to go on to angiography.
In other words, that the natural history in the greatest preponderance of cases that present with severe explosive headache is not subarachnoid hemorrhage, it's a benign condition

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that eventually goes on, let's say, to be migraine, tension headaches, et cetera, and that you don't need to go on and do an angiogram in spinal fluid-negative and CT-negative cases.
This all stems, let me just say, by a paper from a very good colleague and friend of mine, Neil Raskin, who reported in 1985 in a paper with Day, that thunderclap headache with normal CT and normal spinal fluid imaging, that they reported a case that they went on to angiogram and had an internal carotid aneurysm with spasm around it, and that in thunderclap headache presentations with normal CT and normal spinal fluid that one should go on and do an angiogram, you know, to rule out an aneurysm.
But subsequent bigger prospective studies showed that the natural history of explosive headache in the greatest preponderance of cases was benign when you had normal CT and normal spinal fluid. So in other words, you didn't need to go on and do an angiogram.
Q. What is the percentage of cases where somebody really does have a subarachnoid bleed and the CT and the lumbar puncture are normal? I mean, is that a very small percentage

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my notes so we can finish up.
THE VIDEOGRAPHER: The time is 5:15, and this is the end of tape No. 2 in the deposition of Dr. Richard Rubenstein. We are off the record.
(Short recess.)
THE VIDEOGRAPHER: This is the beginning of tape No. 3 of the deposition of Dr. Richard Rubenstein. The time is 5:22. We are back on the record.
MS. McCREADY: Q. And, Dr. Rubenstein, just a couple of other questions about your report. I just want to understand.
It's your opinion it's more likely than not that Todd Allen did not have a sentinel bleed or any aneurysm the morning of April 19; is that right?
A. Well, he obviously had an aneurysm in the morning --
Q. In the morning -- I am sorry.
A. Well, I mean, he had an unruptured aneurysm, obviously, in the morning of, you know, so to qualify your statement --
Q. Thank you. Let me make sure.
It's your opinion that he didn't have a bleed or a ruptured aneurysm the morning of

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April 19?
A. Yes. I think it's more likely than not that this represented an episode of real breakthrough pain that he had from his chronic preexisting condition. And, you know, is it possible that he had a sentinel headache? Anything is possible, but I don't think that he ruptured the aneurysm until 2:00 that afternoon.
Q. Then in your opinion, then, because part of your report is, okay, even assuming he had a sentinel bleed or some sort of a bleed that morning, there's really nothing that could have been done for him; is that your opinion?
A. Well, I am -- you know, if he had a sentinel hemorrhage, a sentinel bleed, a warning leak, let's say, which I don't believe he had, I don't believe there was sufficient accompanying symptoms to warrant a higher index of suspicion that he get a CT scan or an LP.
But let's say, under ideal circumstances, let's say, hypothetically, that, you know, a sentinel headache had been suspected, he had obtained a CT, which I think in the greatest likelihood, or would be more likely than not to have been negative, and that he had had an

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LP, and that he then had -- and it had been diagnosed, let's say he had xanthochromic spinal fluid, and then he went on to be transferred, have angiog -- you know, transferred to either Providence or Alaska Regional, have the angiography, et cetera, we don't know where the aneurysm was, we don't know if it was in an accessible versus inaccessible location, we don't know if it would have been a candidate for endovascular treatment versus surgical treatment.
There are a lot of unknowns. But I think what is certain, that is even under optimum circumstances, had it been diagnosed, that he would bave rebled that afternoon and died no matter what had been done.
Q. What is that based on, this assumption that he would have just rebled and nothing could have been done for him?
A. Well, because, one, just in terms of the -- I believe that he rebled sometime right around 2:00 p.m., you know, when he laid down to take a nap. I believe he bled, you know, at the time he went to sleep, to take a nap.
Q. My understanding is that it's your opinion that it's more likely than not that that

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is when he actually bled, not that he rebled?
A. Yes.
Q. But then assuming, you know, for just the purposes of -- I want to understand the rest of your opinions that, even assuming he had some sort of a sentinel bleed that morning, it's your opinion that he would have rebled that afternoon and nothing could have been done for him to change his outcome? That's my understanding.
A. Correct.
Q. Okay. That's what I wanted to understand, what that is based on.
A. It's based on, from what I know to be the mechanics of treating an aneurysm in Anchorage; in other words, I don't believe that, you know, treatment with Mannitol or treatment with anti-osmotic agents or keeping his head up, you know, as Dr. Cantu -- would have had any impact on his outcome. And I will go into why not.
But that aside, I just think that the mechanics of working this up in a timely fashion and not knowing where the aneurysm was, whether it was accessible, inaccessible, et cetera, whether he was a candidate for endovascular surgery or

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even if he was a candidate for acute operative intervention, it does not appear to me that it would have happened in a timely enough fashion in Anchorage at Providence or Alaska Regional Hospital to have prevented his hemorrhage.

Q. So --

A. By the way, as I said, irrespective of treatment anywhere, the mortality of subarachnoid hemorrhage is about 50 percent of all cases.

Q. Right. But in this case, if I understand what you said, it sort of boils down to the logistics of the fact that he had this aneurysm when he was in Anchorage?

A. Yes. Let's put it this way. He had this aneurysm probably for a long time.

Q. I'm sorry, the rupture.

A. Probably for many years, but it was an asymptomatic aneurysm.

Q. Sure.

A. You know, it's said, by the way, that about 9 percent of all autopsied patients are discovered, incidentally, to have incidental asymptomatic aneurysms.

Q. Right. I am sorry that I wasn't

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clear about the -- distinguishing between the ruptured and unruptured.

But if I understand your opinion that it's -- because Todd Allen, the logistics of him actually getting worked up and treated because he was in Anchorage, that just would lead you to believe that they just --

A. It wouldn't have happened.

Q. It wouldn't have happened.

A. He would have been dead no matter what had been done.

Q. Who have you -- have you talked to anyone about the logistics of dealing with a patient with an aneurysm or a ruptured aneurysm in Anchorage?

A. I mean, I've reviewed in detail all of the medical records. I have looked at Dr. Levy's report. I have talked to Mr. Guarino about what the logisties were in Anchorage, and, you know, that there are three neurosurgeons in the state. It's not clear to me whatsoever that either Godursky or Craelic or Cohen were doing aneurysm surgery on 4-19-03 in Anchorage.

And I think even if they were, under optimum circumstances, they would not have

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operated on him within, you know, six to 12 hours of the presentation of the sentinel hemorrhage at 7:10 a.m., if we're presuming that that's what occurred, and that his workup would not have been completed or substantially done by the time that he rebled to have prevented his demise.

You know, all of this is total speculation. You don't even, one, know that he had an aneurysm. We know that he had a subarachnoid hemorrhage. You know, the greatest likelihood is certainly it was an aneurysmal subarachnoid hemorrhage. We don't know the location, we don't know the accessibility, we don't know the best method of treatment.

Q. Right. And we've got a lot of things that we don't --

A. Circumstantial evidence.

Q. Well, yeah. We don't know because he wasn't worked up that morning, on April 19th at ANMC, so we don't have a lot of information.

A. As I said, it's my belief -- it's my opinion, let's put it that way, to a reasonable degree of medical probability that -- and certainly, an imaging study that morning I believe would have been normal.

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Q. And it wouldn't have told you anything?

A. It wouldn't have told you anything.

Q. Did you talk to Dr. Levy?

A. No.

Q. Have you talked to any of the neurosurgeons in Anchorage?

A. No.

Q. Do you know Dr. Cohen or Dr. Godursky or Dr. Craelic?

A. No. I don't know any of them.

Q. Really? Okay.

A. I have seen their names plenty of times, but I don't know them.

Q. Sure.

Aside from talking to Mr. Guarino and reviewing the records and the reports in this case, is there anything else that you are -- you are relying on or you looked at in terms of the coming to the conclusion that the logistics of Mr. Allen having this ruptured aneurysm in Anchorage created problems with him getting timely treatment that would have changed his outcome?

A. Right. I don't believe there was anything that would have been done that would have